

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) An examination apparatus for examining an object of interest, the examination apparatus comprising:

a source of radiation for generating a first radiation penetrating the object of interest; and

a ~~scatter radiation detector for detecting a second radiation of the first radiation; wherein the second radiation is scatter radiation which is~~ radiation form at least one of the source and scattered radiation scattered from the object of interest;

wherein the ~~scatter radiation detector~~ is stationary during scanning of the object of interest; and wherein the source of radiation is displaceable along a path during the scanning of the object of interest.

2. (Original) The examination apparatus of claim 1, wherein the source of radiation is displaceable along at least a first portion of a first circular path.

3. (Currently Amended) The examination apparatus of ~~claim 2~~
claim 1, wherein a location of a region within the object of interest from which scatter originates is coded on a coordinate of the ~~scatter radiation detector~~.

4. (Currently Amended) The examination apparatus of ~~claim 3~~
claim 1, wherein the ~~scatter radiation detector~~ is stationary arranged centrally to a rotational axis during scanning of the object of interest and extends along a portion of a ~~second circular further path~~ around the rotational axis; wherein the ~~scatter radiation detector~~ comprises at least one detector element; wherein the at least one detector element is arranged along the portion of the ~~second circular further path~~; wherein the portion of the ~~second circular further path~~ corresponds to the ~~first portion of the first circular path of the source of radiation~~; wherein the at least one detector element is an energy-resolving detector element; and

wherein ~~the~~ coordinate of the ~~scatter radiation~~ detector on which a height of ~~the~~ a region within the object of interest from which scatter originates is coded is a radial coordinate.

5. (Currently Amended) The examination apparatus of ~~claim 2~~ claim 1, further comprising:

a primary collimator for collimating the first radiation such that the first radiation has a wedge shape and converges at a stationary point of the ~~transmission~~ detector; a secondary collimator for absorbing further radiation which is propagating in a direction different from the direction defined by a cone semi angle and a scatter angle; and a transmission detector for receiving ~~a third~~ an attenuated radiation attenuated by the object of interest; wherein the transmission detector is stationary during scanning of the object of interest.

6. (Original) The examination apparatus of claim 5, wherein the secondary collimator comprises a plurality of channels formed by a radiation absorbing material; and wherein each of the channels of the plurality of channels is oriented with respect to the

direction defined by the cone semi angle and the scatter angle.

7. (Currently Amended) The examination apparatus of ~~claim 2~~
claim 4, wherein the rotational axis is defined by a center of the
~~first circular path~~ and a center of the ~~second circular~~ further
path; wherein the rotational axis is perpendicular to a first area
encircled by the ~~first circular path~~ and perpendicular to a second
area encircled by the ~~second circular~~ further path; wherein the
transmission detector is stationary arranged on the rotational
axis; wherein the stationary point of the transmission detector at
which the ~~first~~ radiation converges is located in a detection
center of the transmission detector; and wherein ~~the~~ a third
radiation attenuated by the object of interest is converging at the
stationary point while the source of radiation is moving along a
portion of the ~~first circular path~~.

8. (Original) The examination apparatus of claim 1, wherein
the examination apparatus is transportable and adapted for baggage
inspection; and wherein the source of radiation is a polychromatic
x-ray source.

9. (Currently Amended) The examination apparatus of claim 1, wherein the source of radiation comprises a laser pointer, ~~and wherein a laser beam of the laser pointer, which is aligned with the third radiation, is aimed on the stationary point for facilitating alignment of the examination apparatus~~ configured to provide an alignment beam to facilitates alignment of the source of radiation toward a desired direction.

10. (Currently Amended) The examination apparatus of claim 1, further ~~comprising,~~ comprising a calculation unit for reconstructing an image from readouts of the ~~transmission detector and the scatter radiation detector;~~ wherein the examination apparatus is adapted for the detection of explosives in the object of interest by using readouts from the ~~scatter radiation detector.~~

11. (Currently Amended) A method of examining an object of interest with an examination apparatus, the method comprising the ~~steps~~ acts of:

energizing a source of radiation such that the source of

radiation generates a first radiation adapted to penetrate the
object of interest;

performing an energy measurement of a second radiation
scattered from the object of interest by means of a scatter
radiation detector with energy resolving detector elements; wherein
the scatter radiation detector is stationary during the scanning of
the object of interest; and

displacing the source of radiation during a scanning of the
object of interest.

12. (Currently Amended) The method of claim 11, wherein the
displacing act displaces the source of radiation ~~is displaced along~~
at least a first portion of a first circular path.

13. (Currently Amended) The method of claim 11, wherein
further comprising the act of coding a location of a region within
the object of interest from which scatter originates ~~is coded on a~~
coordinate of the scatter radiation detector.

14. (Currently Amended) The method of ~~claim 11, wherein claim~~

12, further comprising the act of defining a rotational axis ~~is defined by a center of the first circular path and a center of the~~
a second circular path, wherein the scatter radiation detector
extends along the second circular path; wherein the rotational axis
is perpendicular to a first area encircled by the first circular
path and to a second area encircled by the second circular path;
wherein the scatter radiation detector is arranged at least at a
second portion of the second circular path.

15. (Currently Amended) The method of claim 11, ~~further~~
~~comprising the steps of:~~ further comprising the acts of:

moving an apparatus comprising the source of radiation and the
scatter radiation detector to a location of the object of interest;
and

examining the object of interest.

16. (Currently Amended) The method of claim 11, ~~further~~
~~comprising the steps of:~~ further comprising the acts of:

activating a laser pointer; wherein a laser beam of the laser
pointer is aligned with the ~~third~~ first radiation; and

aiming at the scatter radiation detector for aligning scanning.

17.(Original) Computer program product stored on a computer readable medium, wherein, when the computer program product is executed on an examination apparatus for examination of an object of interest, the examination apparatus performs the following operation: energizing a source of radiation such that the source of radiation generates a first radiation adapted to penetrate the object of interest; displacing the source of radiation during a scanning of the object of interest; performing an energy measurement of a second radiation scattered from the object of interest by means of a scatter radiation detector; wherein the scatter radiation detector is stationary during the scanning of the object of interest.

18.(New) The examination apparatus of claim 1, further comprising a platform configured to move the object of interest, and a calculation unit configured to coordinate movement of the source of radiation and the platform and to construct an image from

outputs of the scatter radiation detector.

19.(New) The examination apparatus of claim 1, wherein the radiation detector has a shape that matches the path of the source of radiation.

20.(New) The method of claim 11, further comprising the acts of:

moving the object of interest; and
coordinating the displacing act with the moving act to
construct an image from the energy measurement.

21.(New) The computer program product of claim 17, executed on the examination apparatus, the examination apparatus further performing the acts of:

moving the object of interest; and
coordinating the displacing act with the moving act to
construct an image from the energy measurement.